

MACQUARIE  
UNIVERSITY



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SPONSORSHIP OPPORTUNITIES

MACQUARIE iGEM 2014



## **Sponsorship of team Macquarie at the international Genetically Engineered Machine (iGEM) competition 2014**

I am writing to you on behalf of a team of biomolecular science students in their final year at Macquarie University who are competing in the iGEM competition in 2014. We are asking for assistance in helping us represent not only the University but Australia's strong scientific industry.

iGEM is the premier competition in synthetic biology and the only of its kind in the world. The iGEM competition was established in 2004 by the Massachusetts's Institute of Technology and since then it has substantially grown both in size and prestige (see <http://igem.org>). The field of synthetic biology is a relatively new research area that combines biology and engineering. The students that participate in the iGEM competition are therefore an important part of this evolving new discipline and have the opportunity to demonstrate their skills in cutting edge research in the field.

In 2014 iGEM is in its 10th anniversary. The Giant Jamboree will be held in Boston from October 30<sup>th</sup> to November 3<sup>rd</sup>, with over 2,500 students from 245 universities and 32 countries expected to attend. This will be Macquarie University's 5th year competing and we are consistently the highest performing university from Australia. Last year the team won a silver medal and we have even higher expectations for this year's event.

Our projects' aim is to synthetically create the genes that encode chlorophyll then have them expressed in a bacterial host and if achieved will be a world first. Outreach activities will also be run to educate the local community about issues and controversies surrounding advanced biology. Through your sponsorship we will be able to brand your company as a chief benefactor of these outreach programs.

I'd encourage you to explore the work we're conducting as outlined in this document. It has already been highly engaging and rewarding for all involved. If you would like to know more about our project, the competition or sponsorship requirements please do not hesitate to contact either myself or our advisor Dr. Louise Brown ([louise.brown@mq.edu.au](mailto:louise.brown@mq.edu.au)).

Thank you in advance for your time and we look forward to hearing from you shortly.

Kind regards,

**Robert Hewetson**

On behalf of the Macquarie University iGEM team

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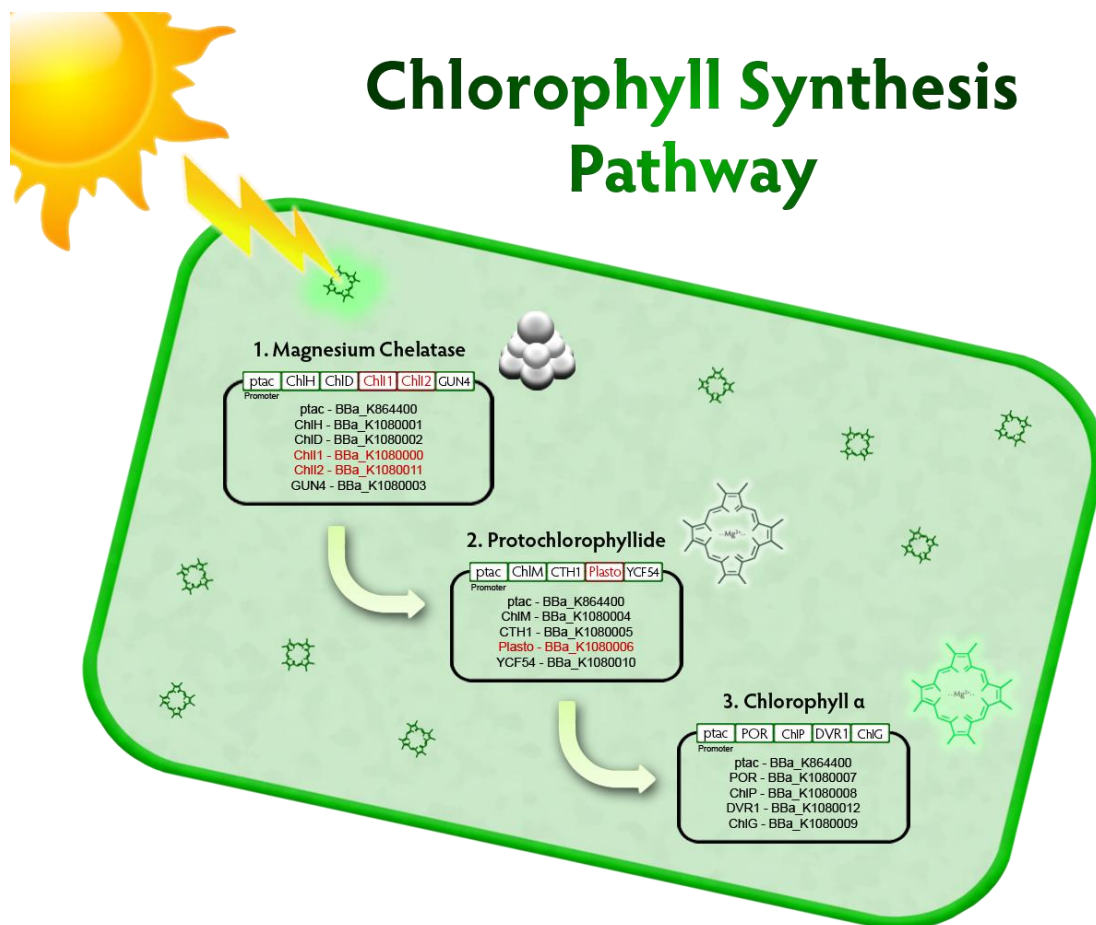


# THE PROJECT

The 2014 Macquarie University iGEM team is constructing three operons that will contain 13 synthetic genes that will govern the chlorophyll biosynthesis pathway (see below), leading to the production of chlorophyll within *Escherichia coli*. The thirteen genes that govern the five-step pathway were sourced from the green alga *Chlamydomonas reinhardtii* and designed into synthetic parts using Gibson Assembly.

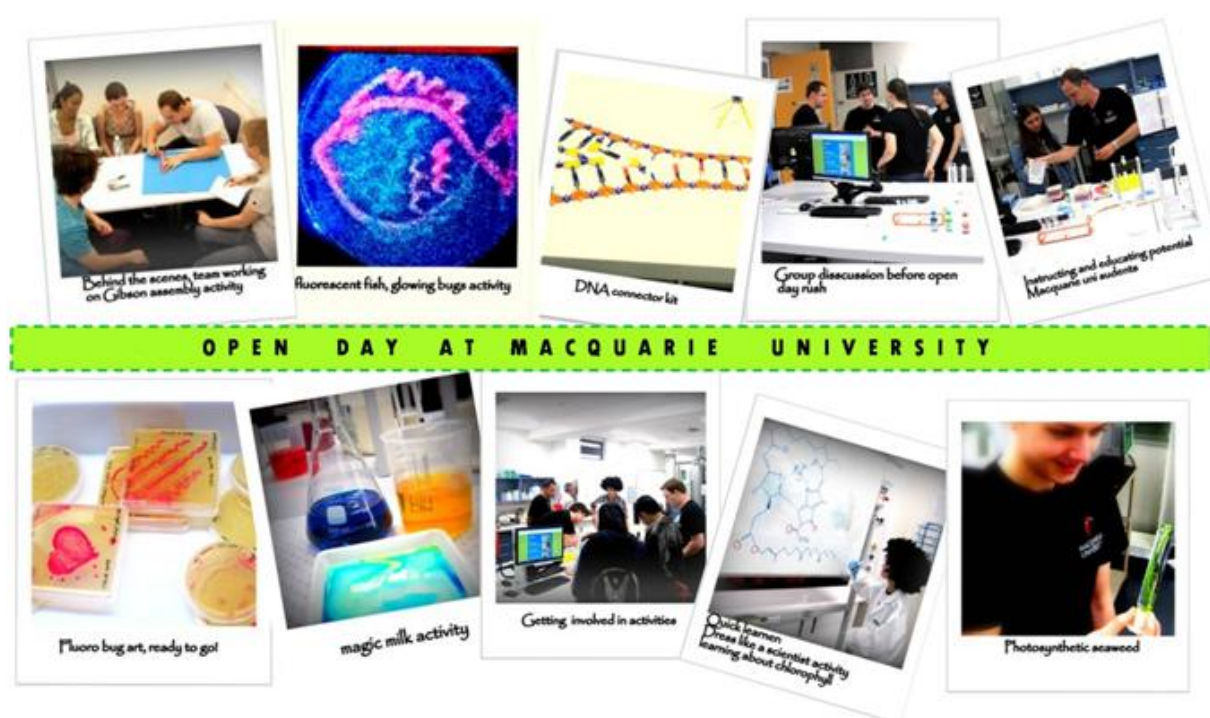
Chlorophyll is a core component in the process of photosynthesis as it harvests light and is involved in the excitation transfer of energy. The chlorophyll biochemical pathway is an oxygenic photosynthetic process that oxidizes water to produce hydrogen ions.

Our project is therefore the first step in the creation of a potential renewable, synthetic energy source as we begin to understand more about Photosystem II. As hydrogen gas produced by the bacteria can be harvested into power generation this is potential for a long-term energy solution that would benefit future generations.



# OUTREACH

As part of our involvement in the iGEM competition we will be running outreach programs to educate the local community about various issues surrounding not only synthetic biology but advanced biology in general. This will include sustainability, economic impacts, bioethics and safety issues in regards to synthetic biology.



The cornerstone of our outreach campaign is our new interactive online contest titled ['So You Think You Can Synthesise'](#). This will be run in the format of a reality television show with voters choosing their favourite 'scientist' each week with three respected academics as judges. We will be targeting young undergraduate and high school students to take part in the weekly sessions where they can ask questions of our team about synthetic biology.

Other campaigns include Macquarie University's Open Day where activities will be run to foster young children's interest in science, radio appearances and a potential TEDxMacquarie University talk in September. We will be utilising our University, local media and also social network to generate interest in our outreach campaign and project in general.

Through your sponsorship we will be able to brand your company as a chief benefactor of these outreach programs.

# SPONSORSHIP

We hope to obtain sufficient funding to send a team of four or more students to Boston to present this year's research project, at approximately \$3,500 per student including a \$700 registration fee. Any financial contribution you can make towards this goal will be highly appreciated and all donations above \$500 will be recognised as shown below

As mentioned, iGEM is the largest gathering of synthetic biologists globally. There is significant visibility potential at the Giant Jamboree and events leading up to it. Additionally sponsors gain exposure and interact with both students and academics. Many of our team members are graduating and are likely to pursue careers in this field. This is a worthwhile chance to scout some of the emerging graduates in this industry whilst also bridging the gap between undergraduate study and industry.

All sponsors will receive a post event summary report and certificate. Press releases are also available on request.

The Macquarie iGEM team would be very humbled to have you and your company's generous support.

	Bronze \$500-1500	Silver \$1500-3000	Gold \$3000+
Company logo on all print promotions	x	x	x
Company logo and website link on our iGEM wiki sponsors page	x	x	x
Acknowledgement in our growing social media presence	x	x	x
Company logo on front page of our Wiki		x	x
Company logo on our interactive website ( <i>So You Think You Can Synthesise</i> )		x	x
Company logo on the back of all team t-shirts to be worn in Boston and public events		x	x
Verbal acknowledgement of sponsorship in the lead up to the Giant Jamboree		x	x
Company logo on the front of all team t-shirts and mascot			x
Branded as a major sponsor throughout our advertising campaign, press releases, print promotions and at the Giant Jamboree			x

